Listing of Claims

Please amend claim 14, and

add new claims 35 and 36 as follows:

1. (previously presented) A composition comprising:

(a) a polymerization accelerator comprising a biocompatible functional group, a carbonyl group, and an N-vinyl group; and

(b) a polymerizable material,

wherein the polymerization accelerator increases the rate that the polymerizable material becomes incorporated into a polymerized product in a polymerization reaction.

2. (original) The composition of claim 1 further comprising a polymerization initiator.

3. (original) The composition of claim 2 wherein the polymerization initiator comprises a photoinitiator group.

4. (original) The composition of claim 3 wherein the photoinitiator group is a long-wave ultra violet- or visible light-activatable molecule.

5. (original) The composition of claim 1 wherein the polymerizable material comprises a macromer.

6. (original) The composition of claim 5 wherein the macromer is selected from the group consisting of water-soluble macromers.

7. (original) The composition of claim 5 wherein the macromer is present at a concentration in the range of 0.5 – 50 wt%.

8. (original) The composition of claim 7 wherein the macromer is present at a concentration in the range of 1 – 30 wt%.

9. (previously presented) The composition of claim 1 further comprising an acceptor or reductant that forms a free radical and causes free radical polymerization of the polymerizable material in the polymerization reaction.

10. (original) The composition of claim 1 wherein the biocompatible functional group is selected from phosphonate (PO_3^-), sulfonate (SO_3^-), carboxylate (COO^-), hydroxyl (OH), albumin binding moieties, and phospholipid moieties.

11. (original) The composition of claim 1 wherein the biocompatible functional group comprises a sulfonate group.

12. (cancelled)

13. (cancelled)

14. (currently amended) The composition of claim [13] 1 wherein the polymerization accelerator comprises an N-vinyl amide group.

15. (previously presented) The composition of claim 1 wherein the N-vinyl nitrogen is an atom in a heterocyclic ring.

16. (previously presented) The composition of claim 1 wherein the polymerization accelerator is able to react with the polymerizable material to form the polymerized product having biocompatible properties.

17. (previously presented) The composition of claim 1 wherein the polymerization accelerator is present in an amount sufficient to improve the biocompatibility properties of the polymerized product.

18. (previously presented) The composition of claim 1 wherein the polymerization accelerator is present in an amount sufficient to promote formation of the polymerized product.

19. (original) The composition of claim 18 wherein the polymerization accelerator is present at a concentration of 0.05 wt% or greater.

20. (original) The composition of claim 19 wherein the polymerization accelerator is present at a concentration in the range of 0.05 – 1.0 wt%.

21. (previously presented) A composition comprising:

(a) a polymerization accelerator comprising:

i) a biocompatible functional group ii) an N-vinyl group, and iii) a carbonyl group; and

(b) a macromer,

wherein the polymerization accelerator is able to be reacted with the macromer to form a biocompatible matrix and the polymerization accelerator increases the rate that the macromer becomes incorporated into the biocompatible matrix.

22 –27. (canceled).

28. (previously presented) The composition of claim 5 wherein the macromer comprises a protein or polyamino acid.

29. (previously presented) The composition of claim 28 wherein the macromer is selected from the group consisting of gelatin, collagen, fibronectin, laminin, albumin, and active peptides thereof.

30. (previously presented) The composition of claim 5 wherein the macromer comprises a polysaccharide.

31. (previously presented) The composition of claim 30 wherein the macromer is selected from the group consisting of hyaluronic acid (HA), starch, dextran, heparin, and chitosan.

32. (previously presented) A composition comprising:

(a) a polymerization accelerator comprising a biocompatible functional group, wherein the biocompatible functional group comprises a sulfonate group; and

(b) a polymerizable material,

wherein the polymerization accelerator is able to be reacted with the polymerizable material to form a biocompatible matrix and the polymerization accelerator increases the rate that the polymerizable material becomes incorporated into the biocompatible matrix.

33. (cancelled)

34. (previously presented) The composition of claim 21 wherein the biocompatible functional group comprises a sulfonate group.

35. (new) The composition of claim 1 wherein the biocompatible functional group comprises a group selected from phosphonate (PO_3^-), sulfonate (SO_3^-), and carboxylate (COO^-).

36. (new) The composition of claim 21 wherein the biocompatible functional group comprises a group selected from phosphonate (PO_3^-), sulfonate (SO_3^-), and carboxylate (COO^-).